UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAY 19 2016

REPLY TO THE ATTENTION OF:

Mr. Chuck Pinter
Sr. Environmental Engineer
Ford Motor Company Environmental Quality Office Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, Michigan 48126

RE: Approval for Risk-Based Cleanup and Disposal of Polychlorinated Biphenyls (PCBs) River Raisin Area of Concern (AOC), Monroe, Michigan

Dear Mr. Pinter:

The U.S. Environmental Protection Agency, Land and Chemicals Division (LCD), hereby grants approval to the Ford Motor Company (Ford) to dredge and dewater Toxic Substances Control Act (TSCA) level polychlorinated biphenyl (PCB) contaminated sediments from a portion of the River Raisin Area of Concern in Monroe, Michigan referred to as the non-aqueous phase liquid (NAPL) Area. You submitted the notification and application in accordance with Section 6 of the TSCA, 15 U.S.C. § 2605, and the federal PCB regulations at 40 C.F.R. § 761.61(c). This approval allows PCB contaminated sediments at a concentration of 50 parts per million (ppm) or greater to be mechanically dredged from the River Raisin and transported, via watertight scows, to a sediment dewatering area located adjacent to the nearby Ford Motor Company property. Once dewatered, the sediment will be stabilized with Portland cement, placed directly into trucks parked on the asphalt pad, and transported to a TSCA-permitted chemical waste landfill permitted by EPA under section 3004 of the Resource Conservation and Recovery Act (RCRA), or by a state authorized under 3006 of RCRA.

This approval is granted in accordance with the federal PCB regulations codified at 40 C.F.R. § 761.61(c), under which the Regional Administrator may approve a method to sample, cleanup, or dispose of PCB remediation waste if it is found that the method will not pose an unreasonable risk of injury to human health or the environment. The authority to grant such approvals has been delegated to the Director of the LCD.

This approval is effective as of the date of this letter. All cleanup and disposal activities must be carried out in accordance with the approved conditions that are enclosed with this letter and the procedures described in the April 25, 2016 risk-based approval application, the November 2015 Basis of Design (BOD) Report, and the April 2016

Long-term Monitoring and Maintenance (LTMM) Plan submitted by Ford in support of the application. Ford is responsible for ensuring continued compliance with all applicable provisions of TSCA, the federal PCB regulations, and the conditions of this approval. Any departure from the conditions of this approval must receive prior written authorization from this office. Furthermore, this approval does not relieve Ford from compliance with any other federal, state, or local regulatory requirements.

If you have any questions regarding this approval, please do not hesitate to contact Jennifer Dodds, of my staff, at (312) 886-1484 or dodds.jennifer@epa.gov.

Sincerely,

Margaret M. Guerriero
Director
Land and Chemicals Division

Enclosure

290 Elwood Davis Road, Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

April 1, 2016

Mr. Peter Ramanauskas
Regional PCB Coordinator
U.S. Environmental Protection Agency
77 West Jackson Boulevard (DT-8J)
Chicago, Illinois 60604

Re: River Raisin AOC – NAPL Area
Risk-Based Approval Request per 40 CFR § 761.61(c)
Monroe, Michigan

Dear Mr. Ramanauskas:

This letter requests approval under 40 CFR § 761.61(c) to implement the remedial activities proposed and specified in the Basis of Design Report – 100% Submittal (BODR; Anchor QEA and Mannik and Smith 2015) within a portion of the River Raisin Area of Concern (AOC) referred to as the NAPL Area (Figure 1). Specifically, the NAPL Area is defined as the portion of the River Raisin AOC containing an apparent nonaqueous phase liquid (NAPL) substance and concentrations of polychlorinated biphenyls (PCBs) greater than 50 parts per million (Figure 2). A copy of the BODR was previously provided to EPA and additional copies can be provided upon request. Remedial activities are being performed in accordance with the Great Lakes Legacy Act Project Agreement between EPA and non-federal sponsors, including the Michigan Department of Environmental Quality (MDEQ) and the Ford Motor Company (Ford).

As shown on Figure 2, the approximately 1.45-acre NAPL Area has been divided into the following three subareas:

- Upper Shelf Area: the relatively flat, elevated area closest to the shoreline

- Transition Area: the sloped area connecting the Upper Shelf Area to the Navigation Channel Area
- Navigation Channel Area: the portion of the NAPL Area located within the navigation channel of the River Raisin

As indicated in the BODR, remedial activities will be implemented to address the presence of PCBs and NAPL within the NAPL Area and will consist of the following:

- Upper Shelf Area – Remediation activities within the approximately 0.30-acre Upper Shelf Area will consist of dredging to a target depth of 8.2 feet. Dredging within the Upper Shelf Area and adjacent side slopes will result in the removal of approximately 5,100 cubic yards (cy) of sediment (including approximately 900 cy of sediment from the adjacent side slopes). Dredging to a depth of 8.2 feet adjacent to the shoreline will be facilitated by the use of the steel sheetpile wall to be installed by GLNPO prior to, or concurrent with, dredging, capping, and cover activities. After dredging activities have been completed, a 6-inch cover will be placed over the Upper Shelf Area. Cover material will consist of a graded gravel material. Over time, bathymetry in this area is expected to re-establish itself to existing conditions by natural, ongoing depositional riverine processes.
- Transition and Navigation Channel Areas – Remediation activities within the approximately 1.15-acre Transition and Navigation Channel Areas consist of dredging to a target depth of 10 feet below the existing sediment surface. Dredging within these areas and adjacent side slopes will result in the removal of approximately 19,700 cy of sediment (including approximately 1,450 cy of sediment from the adjacent side slopes). After dredging activities have been completed, the areas will be covered with an engineered cap. The engineered cap will consist of a chemical containment layer comprising sand and organoclay, a filter layer comprising gravel material, and an armor layer comprising Ohio Department of Transportation Type C or B material as appropriate. Similar to the Upper Shelf Area, bathymetry in these areas is expected to re-establish itself over time to existing conditions by natural, ongoing depositional riverine processes.

In total, the above remedial approach will involve dredging of an estimated 24,800 cy of material, placement of cover material over approximately 0.3 acre, and installation of an

engineered cap over approximately 1.15 acres. Dredged materials will be disposed of at the U.S. Ecology Wayne Disposal Facility located in Belleville, Michigan, as waste regulated under the Toxic Substances Control Act (TSCA). Following the performance of capping and cover activities, the NAPL Area surface will consist of clean materials and natural deposition will then restore the river bathymetry to existing conditions over time. The scope of the remedy presented in the BODR was developed collectively by Ford, EPA (both the GLNPO and TSCA groups), and MDEQ. The combination of dredging, capping, and cover placement to be performed in the NAPL Area as specified in the BODR is protective of human health and the environment and is consistent with the provisions of TSCA's risk-based alternative under 40 CFR § 761.61(c).

Following the installation of the engineered cap, its integrity will be monitored by Ford both periodically and after certain events consistent with EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, EPA-540-R-05-012 (EPA 2005). The scope of long-term monitoring and maintenance activities was developed collectively by Ford, EPA (both the GLNPO and TSCA groups), and MDEQ and is described in the Long-Term Monitoring and Maintenance Plan (LTMMP; Anchor QEA 2016). Such activities will include the following:

- Periodic physical and chemical monitoring of the capped area
- Event-based physical and chemical monitoring of the capped area
- Additional monitoring based on the results of periodic and event-based monitoring, if appropriate
- Cap maintenance activities, performed as needed based on monitoring results

As indicated in the LTMMP, monitoring and maintenance program objectives include:

- Verifying the presence and physical integrity of the armor layer
- Verifying the integrity and effectiveness of the chemical containment layer
- Documenting PCB concentrations, if any, in sediment that deposits on the engineered cap over time
- Providing for repairs and maintenance to the cap if monitoring efforts indicate that such activities are necessary

- Implementing institutional controls to prevent activities that could damage the engineered cap

In response to the information provided herein, Ford respectfully requests that EPA issues a risk-based approval per 40 CFR § 761.61(c) for this project.

If you have any questions regarding this request, please do not hesitate to contact me at 315-453-9009 or acorbin@anchorqea.com.

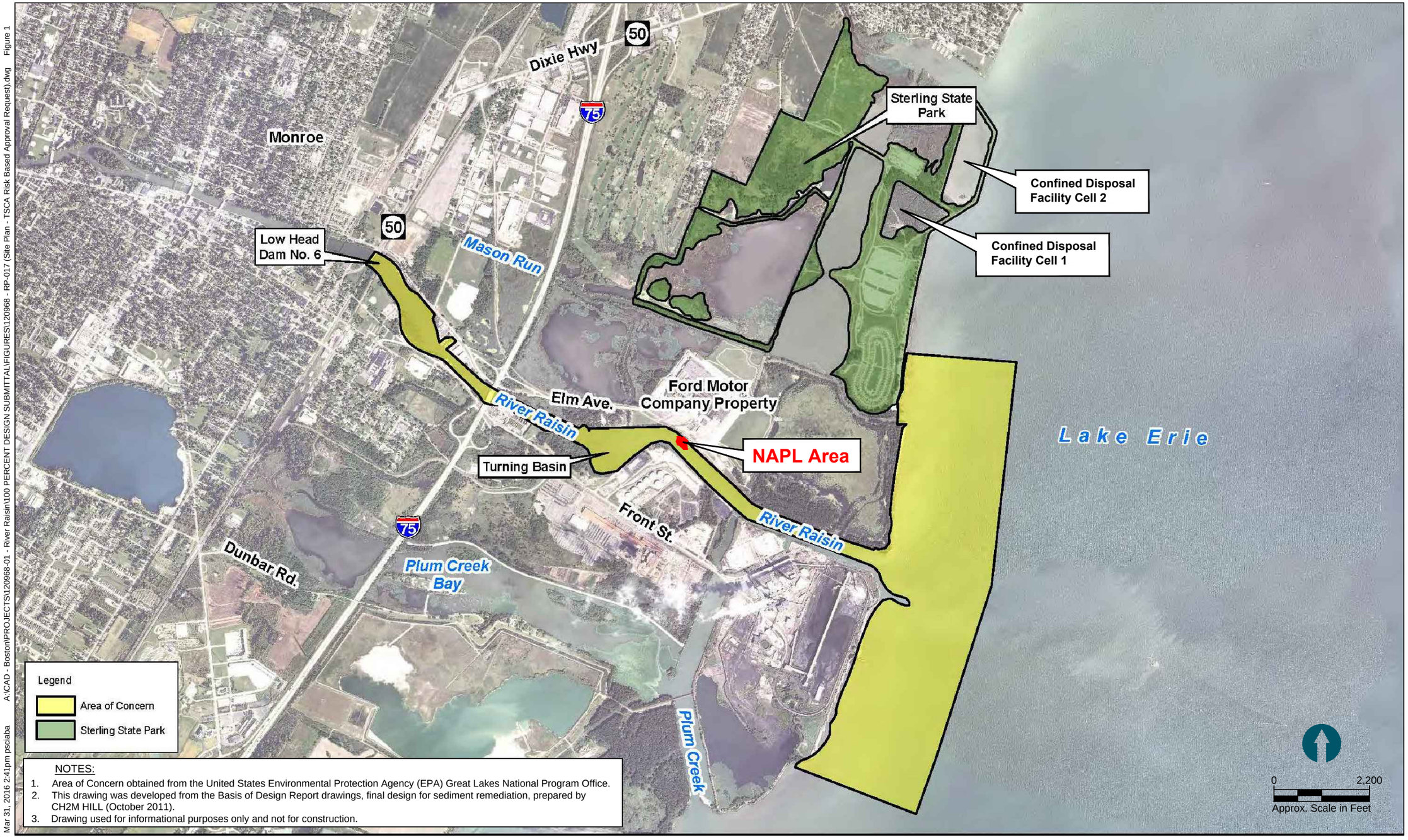
Sincerely,

Andrew Corbin
Anchor QEA, LLC

Cc: Jennifer Dodds, EPA
Scott Cieniawski, EPA
Susan Prout, EPA
Michael Alexander, MDEQ
Chuck Pinter, Ford
Steven C. Nadeau, Honigman Miller Schwartz and Cohn LLP
Tom Peters, Mannik and Smith Group, LLC
Paul Doody, Anchor QEA, LLC

ACC:akm

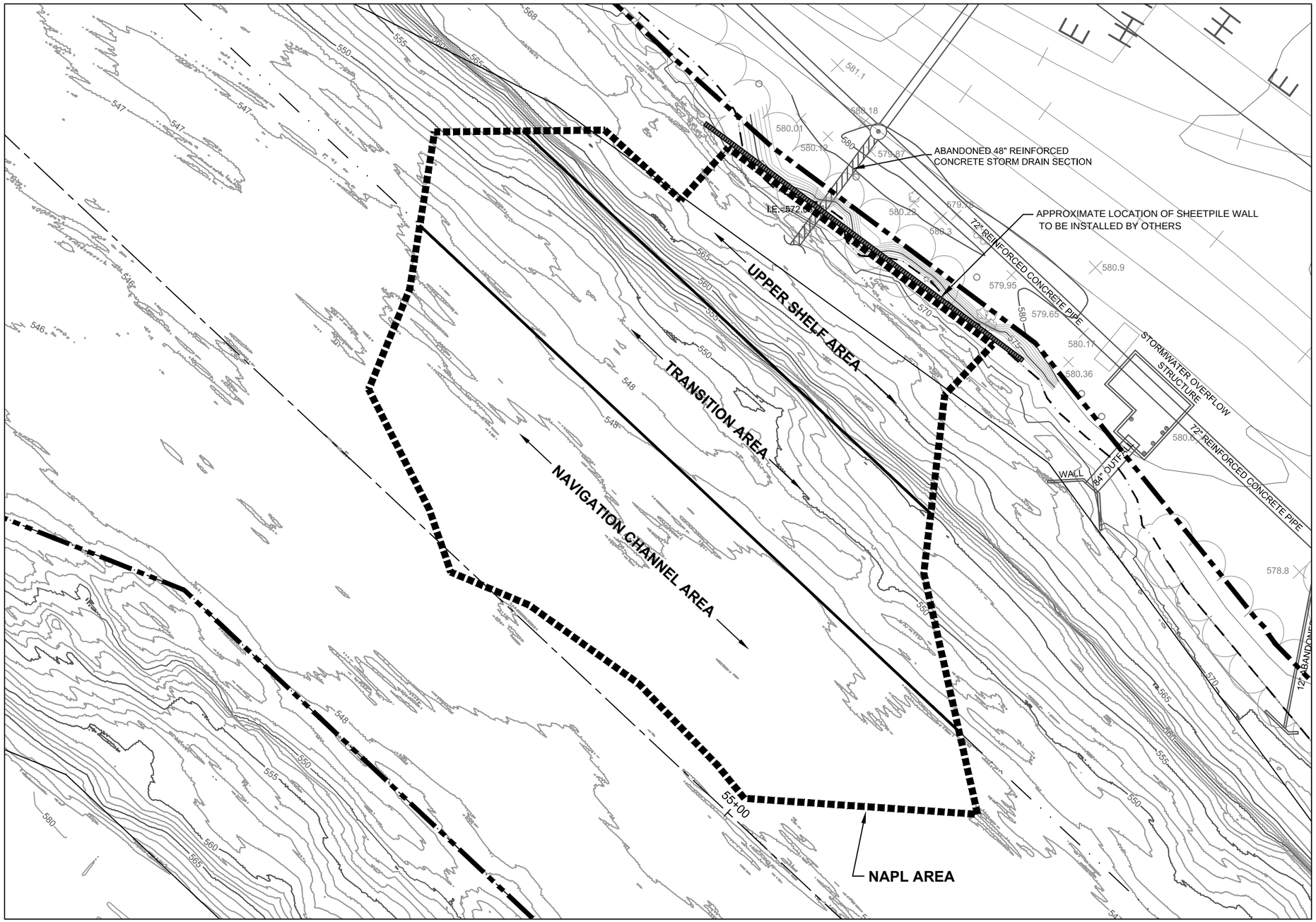
FIGURES



Mar 31, 2016 2:41pm psciaba A:\CAD - Boston\PROJECTS\120968-01 - River Raisin\100 PERCENT DESIGN SUBMITTAL\FIGURES\120968 - RP-017 (Site Plan - TSCA Risk Based Approval Request).dwg Figure 1

ANCHOR QEA

Figure 1
Site Plan
TSCA Risk-Based Approval Request
River Raisin Area of Concern NAPL Area



LEGEND

- NAVIGATION CHANNEL BOUNDARY
- 572 FEET NAVD88 HIGH WATER LEVEL
- NAVIGATION CHANNEL CENTER LINE
- PARCEL BOUNDARY LINE
- CONTOURS (FEET NAVD88) (1-FOOT INTERVAL)
- 579.2718 BENCHMARK
- LIMITS OF WORK

0 50
Scale in Feet

ANCHOR QEA

Figure 2
NAPL Area
TSCA Risk-Based Approval Request
River Raisin Area of Concern NAPL Area

APPROVAL CONDITIONS

A. Authorized Remedial Action

The Ford Motor Company (Ford) is authorized to remove, dewater and dispose of approximately 24,800 cubic yards (cy) of Toxic Substances Control Act (TSCA) level polychlorinated biphenyl (PCB) contaminated sediments from a portion of the River Raisin Area of Concern (AOC) referred to as the non-aqueous phase liquid (NAPL) Area. The remediation of the PCB-contaminated sediments shall be conducted according to approval conditions described below and the procedures described in the April 25, 2016 risk-based application (application), the November 2015 Basis of Design (BOD) Report submitted by Ford in support of the application, and the April 2016 Long-term Monitoring and Maintenance (LTMM) Plan. In the event the approval conditions are inconsistent with the procedures described in the application and design documents, Ford must abide by the approval conditions.

B. PCB Remediation

1. The approximately 1.45-acre NAPL Area has been divided into the following three subareas:

    - Upper Shelf Area: the relatively flat, elevated area closest to the shoreline
    - Transition Area: the sloped area connecting the Upper Shelf Area to the Navigation Channel Area
    - Navigation Channel Area: the portion of the NAPL Area located within the navigation channel of the River Raisin

2. The TSCA-regulated PCB contaminated sediments must be removed in accordance with the remediation limits specified in the risk-based application and supporting documents. The limits and procedures to achieve those limits are summarized below.

    - Mechanical dredging of sediments that contain total PCB concentrations in excess of 50 ppm to reach target dredge elevations ranging from 8.2 feet to 10 feet below the top of sediment
    - Minimization of sediment resuspension and continuous achievement of established surface water quality standards
    - Installation of engineered caps as specified in the BOD Report

- Multi-beam bathymetric survey data will be used to verify the completion of dredging and that each cap and cover layer was installed as specified in the BOD Report
- Post-remedy construction, operation, maintenance, and monitoring of the caps will be implemented as specified in the LTMM Plan

C. Removal of TSCA-regulated PCB Contaminated Sediments

1. Removal of the TSCA-regulated PCB contaminated sediments must be in accordance with the procedures outlined in the application and supporting design documents. The approximately 1.45 acre NAPL Area has been divided into the following three subareas.

    - Upper Shelf Area: the relatively flat, elevated area closest to the shoreline
    - Transition Area: the sloped area connecting the Upper Shelf Area to the Navigation Channel Area
    - Navigation Channel Area: the portion of the NAPL Area located within the navigation channel of the River Raisin

2. The limits of the TSCA dredge areas are identified in the November 2015 BOD Report and are summarized below.

    - **Upper Shelf Area** – Remediation activities within the approximately 0.30-acre Upper Shelf Area will consist of dredging to a target depth of 8.2 feet. As shown on Drawing C-8 – Dredge Plan in Attachment A of the BOD, dredging within the Upper Shelf Area and adjacent side slopes will result in the removal of approximately 5,100 cy of sediment (including approximately 900 cy of sediment from the adjacent side slopes). Dredging to a depth of 8.2 feet adjacent to the shoreline will be facilitated by the use of the steel sheetpile wall to be installed by the Great Lakes National Program Office (GLNPO) prior to, or concurrent with, dredging, capping, and cover activities (see Drawing C-8 – Dredge Plan in Attachment A of the BOD for anticipated wall location and alignment).
    - **Transition and Navigation Channel Areas** – Remediation activities within the approximately 1.15-acre Transition and Navigation Channel Areas consist of dredging to a target depth of 10 feet below the existing sediment surface. As shown on Drawing C-8 – Dredge Plan in Attachment A of the BOD, dredging within these areas and adjacent

side slopes will result in the removal of approximately 19,700 cy of sediment (including approximately 1,450 cy of sediment from the adjacent side slopes).

3. After dredging activities have been completed engineered caps will be installed.

    - **Upper Shelf Area** – A 6-inch cover will be placed over the Upper Shelf Area as shown on Drawing C-13 – Engineered Cap and Residual Cover Plan in Attachment A of the BOD. As indicated on Drawing C-18 – Engineered Cap and Residual Cover Details in Attachment A and in Specification Sections 35 02 00 – Engineered Cap and Residual Cover and 31 05 13 – Soils and Aggregates in Attachment B of the BOD, cover material will consist of a graded gravel material. Over time, bathymetry in this area is expected to re-establish itself to existing conditions by natural, ongoing depositional riverine processes.
    - **Transition and Navigation Channel Areas** – Two types of engineered caps will be installed. Caps A and B are a minimum of 45 inches and 60 inches thick, respectively, and will be installed at the locations shown on Drawing C-13 – Engineered Cap and Residual Cover Plan in Attachment A of the BOD. As indicated on Drawing C-18 – Engineered Cap and Residual Cover Details in Attachment A and in Specification Sections 35 02 00 – Engineered Cap and Residual Cover and 31 05 13 – Soils and Aggregates in Attachment B of the BOD, the engineered caps will consist of the following components (in order from dredged subsurface to surface water):
        - Cap A
            - A 12-inch-thick chemical containment layer comprising sand and organoclay (a lower 6-inch layer to consist of 4% organoclay by weight, and an upper 6-inch layer to consist of 2% organoclay layer by weight)
            - A 6-inch-thick filter layer comprising gravel material
            - A 27-inch-thick armor layer comprising Ohio Department of Transportation (ODOT) Type C Material
        - Cap B
            - A 12-inch-thick chemical containment layer comprising sand and organoclay (a lower 6-inch layer to consist of 4% organoclay by weight, and an upper 6-inch layer to consist of 2% organoclay layer by weight)
            - A 12-inch-thick filter layer comprising gravel material

- A 36-inch-thick armor layer comprising ODOT Type B Material

D. Handling and Disposal of Dredged TSCA level PCB Sediments

1. The dredged TSCA level PCB contaminated sediments from the River Raisin NAPL Area cleanup must be handled in accordance with the procedures outlined in the application and supporting design documents. The procedures are summarized below.

- The TSCA sediments will be mechanically dredged from the river and loaded into watertight scows.
- The loaded scows will be transported to the offloading site at the sediment processing area (SPA) at the adjacent Ford Motor Property Site.
- The removed sediment will be dewatered and stabilized.
- Once the sediment is sufficiently solidified/stabilized to meet the requirements of the disposal facility, the sediment will be placed into trucks, covered with a retractable tarp, and the exterior of the trucks will be decontaminated prior to transporting the sediments to the TSCA-approved Wayne Disposal landfill located in Belleville, Michigan or another TSCA-approved disposal facility.

2. Ford must collect and analyze pre-construction samples for PCBs at all proposed temporary infrastructure sites in accordance with the procedures outlined in the BOD Report.

3. The TSCA and non-TSCA sediment processing areas and site access roadways must be constructed in accordance with designs and specifications provided in the BOD Report.

4. Water generated during the sediment processing activities will be treated onsite by a temporary water treatment system. The water will be treated to remove the contaminants of concern and suspended solids to meet the water quality discharge requirements set by the Industrial/Non-Domestic User Discharge Permit that will be obtained from the Monroe Metropolitan Water Pollution Control Facility (MWPCF). The treatment system will be located within or adjacent to the SPA (see Drawing C-5 – Temporary Facilities, Erosion, and Sedimentation Site Controls Plan – Remediation Support Area in Attachment A of the BOD Report) and designed to handle at least 100 gallons per minute (gpm). The Contractor will conduct water treatment and discharge activities in accordance with all applicable requirements of the permit, including but not limited to, all sampling, testing, reporting, and notifications in

accordance with Specification Section 02 72 00 – WastewaterTreatment and Discharge (Attachment B) of the BOD Report.

5. If PCBs at 50 ppm or above are detected in the carbon filter of the treatment system, it must be disposed in a TSCA-permitted chemical waste landfill or a hazardous waste landfill permitted by EPA under section 3004 of the Resource Conservation and Recovery Act (RCRA), or by a State authorized under section 3006 of RCRA.

6. Solids generated during the treatment process will be characterized and disposed offsite as either TSCA or non-TSCA material along with the solidified dredge material removed from the river.

7. TSCA level PCB contaminated sediments will be disposed of in the TCSA-approved Wayne Disposal Landfill located in Belleville, Michigan or another TSCA-approved disposal facility.

E. Post-Remediation Requirements

1. Equipment associated with the water treatment plant must be sampled for PCBs and decontaminated, if necessary. The decontamination standard is ≤10 micrograms PCBs per 100 square centimeters (≤10 µg/100 cm2) as measured by a standard wipe test as found in 761.79 (b)(3)(i)(A).

2. Once the sediment processing area, temporary access roads, and water treatment plants are dismantled, soil from these areas must be collected and analyzed for PCBs in accordance with the procedures in the BOD Report.

F. Notifications

1. The Remediation and Reuse Branch (RRB) in EPA, Region 5 must be notified in writing if the following occurs:

    - PCBs are detected in the water column of the River Raisin NAPL Area Remedial Project Area.
    - Sheens or plumes of oil are visible in the River Raisin NAPL Area Remedial Project Area.
    - TSCA-level PCB contaminated material is spilled or released from the water treatment plant, the truck decontamination area, or the TSCA dewatering pad.
    - Post-cleanup monitoring in the River Raisin detects PCBs above established cleanup goals.

- TSCA level sediments are to be removed from the TSCA dewatering pad for disposal.
- The TSCA dewatering pad, the water treatment plant, and the truck decontamination area are to be dismantled.

2. Spills involving 1 pound or more by weight of PCBs must be reported to the National Response Center (1-800-424-8802). Within 24 hours, RRB also must be notified about the release of PCB material.

G. Financial Assurance

1. In conjunction with the PCB remediation of the NAPL Area, Ford is perpetually responsible for the long-term monitoring and maintenance of the NAPL Area and the associated caps. Ford shall provide financial surety, subject to EPA approval, sufficient for the work required by April 2016 LTMM Plan. Ford shall establish financial assurance by choosing from the financial assurance mechanisms set forth in 40 C.F.R. §761.65(g) (referencing provisions of Subpart H of 40 C.F .R. Part 264), or any combination of such mechanisms.

2. Documentation that this financial surety is in effect shall be provided to RRB prior to the planned start of any work associated with this Approval. Regardless of the specific mechanism(s) Ford selects to comply with the financial assurance requirements of 40 C.F.R. §761.65(g), EPA retains the right, upon written notice to Ford, to require that variations to, or modifications from, the language prescribed in 40 C.F.R. §264.151 be made in the instrument(s) Ford selects under 40 C.F.R. §264.151 to effect financial assurance.

3. Beginning every five years after the effective date of this Approval, Ford shall demonstrate to RRB that the financial assurance mechanism(s) is/are sufficient to cover any increased costs associated with the implementation of the LTMM Plan. If Ford wishes to change the financial assurance mechanism(s) due to factors other than inflation, Ford shall submit an adjusted financial assurance mechanism(s) (as applicable) to RRB. RRB will review the change(s) and may require Ford to revise the adjusted financial assurance mechanism(s) prior to approving it.

H. Public Participation

1. Public participation activities associated with this Approval have been coordinated through GLNPO. These activities include:

- September 10, 2015: Public presentation of proposed remedy at the monthly meeting of the City of Monroe's Committee on the Environment and Water Quality. Approximately 20 attendees including committee members. The presentation was re-broadcast on local cable access network.
- January 19, 2016: Public presentation of proposed remedy at the City of Monroe's City Council meeting. Approximately 35-40 attendees, including city council members.
- Upcoming Meeting - June 16, 2016: Public information session and presentation at the City of Monroe's Committee on the Environment and Water Quality meeting.

I. Reports

1. When available, Ford must submit the following information to RRB:

- The pre-construction sampling results collected within the footprint of all proposed temporary infrastructure sites
- The post-removal/post-remediation PCB sample results collected within the footprint of temporary infrastructure sites
- The dredging summary report
- Any final report issued after the completion of the River Raisin cleanup project
- All reports required by the LTMM Plan

2. Notification and reports to RRB may be sent to:

Address: Jennifer Dodds
Remediation and Reuse Branch
Corrective Action Section 2
U.S. EPA, Region 5
77 W. Jackson Blvd., LU-9J
Chicago, IL 60604